



Serial No.: 10/026,063

Applicant: BALLARD, David *et al.*

Reply to Final Office Action of April 22, 2004

Atty. Ref.: 11836.0727.NPUS00

PA-00118

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application.

**LISTING OF CLAIMS:**

- 1-6. (Canceled)
7. (Currently Amended): A process comprising:
  - adding peroxide degradable polymers to a wellbore fluid;
  - adding a peroxide source to a wellbore fluid;
  - pumping said wellbore fluids into the wellbore;
  - changing the pH of the fluid in the wellbore using a substantial portion of fluids produced from subterranean formations so as to activate the peroxide source;
  - wherein ~~the inorganic~~ an inorganic peroxide source is encapsulated; and
  - wherein the encapsulating material is substantially insoluble in wellbore fluids having a pH value greater than about 7.5.
8. (Original): The process of Claim 7 wherein the encapsulating material comprises a film-forming polymer.
9. (Original): The process of Claim 8 wherein the film-forming polymer comprises an enteric polymer.
10. (Original): The process of Claim 9 wherein the enteric polymer comprises a copolymer of acrylic acid compounds and acrylate compounds.



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11. (Original): The process of Claim 9 wherein the enteric polymer comprises a copolymer of a mixture of monomers selected from acrylic acid, acrylamide, methacrylic acid, ethylacrylate, methyl methacrylate, and combinations thereof.

12. (Original): A process for degrading polysaccharide polymers contained in a filter-cake located in functional proximity to the surface of a subterranean rock formation penetrated by a well, the process comprising:

suspending a metal peroxide in a polysaccharide-containing wellbore fluid, wherein the wellbore fluid has a pH value greater than about 7.5,

pumping the wellbore fluid into the well,

allowing some filtration of the fluid into a subterranean rock formation to produce a filter cake, wherein the filter cake contains the alkaline earth metal or zinc peroxide, polysaccharides, and any materials that may have been suspended in the wellbore fluid, bringing the well into production of a subterranean rock formation fluid, wherein the formation fluid exhibits a pH of less than about 7.0,

allowing the formation fluids to contact the filter cake so as to lower the pH value of the filter cake, and

allowing the metal peroxide in the filter cake to activate at the lower pH and degrade the polysaccharide components, thereby causing the filter cake to weaken and/or increase in permeability, so as to increase production rates.

13. (Original): The process of Claim 12 wherein the metal peroxide is encapsulated.

14. (Original): The process of Claim 13 wherein the encapsulating material is substantially insoluble in wellbore fluids having a pH value of at least about 7.5.

15. (Original): The process of Claim 14 wherein the encapsulating material comprises a film-forming polymer.



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16. (Original): The process of Claim 15 wherein the film-forming polymer comprises an enteric polymer.
17. (Original): The process of Claim 16 wherein the enteric polymer comprises a copolymer of acrylic acid compounds and acrylate compounds.
18. (Original): The process of Claim 16 wherein the enteric polymer comprises a copolymer of a mixture of monomers selected from acrylic acid, acrylamide, methacrylic acid, ethylacrylate, methyl methacrylate, and combinations thereof.
- 19-20. (Canceled).
21. (Previously Presented): A wellbore fluid comprising: a peroxide degradable polymer and an encapsulated peroxide source,  
wherein the encapsulating material is substantially insoluble in wellbore fluids having a pH value greater than about 7.5.
22. (Previously Presented): A wellbore fluid comprising:  
a peroxide degradable polymer and an encapsulated peroxide source,  
wherein the encapsulating material comprises a film-forming polymer.
23. (Original): The wellbore fluid of Claim 22 wherein the film-forming polymer comprises an enteric polymer.
24. (Original): The wellbore fluid of Claim 23 wherein the enteric polymer comprises a copolymer of acrylic acid compounds and acrylate compounds.



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25. (Original): The wellbore fluid of Claim 23 wherein the enteric polymer comprises a copolymer of a mixture of monomers selected from acrylic acid, acrylamide, methacrylic acid, ethylacrylate, methyl methacrylate, and combinations thereof.

26-28. (Canceled).

29. (Currently Amended): A wellbore fluid comprising:  
a peroxide degradable polymer and an encapsulated peroxide source,  
wherein the peroxide source comprises an inorganic peroxide compound,  
wherein the peroxide source is selected from a zinc peroxide, alkaline earth metal peroxides, and combinations thereof[.].

wherein the encapsulating material is substantially insoluble in wellbore fluids having a pH value of at least about 7.5,

wherein the encapsulating material comprises a film-forming polymer, and

wherein the film-forming polymer comprises an enteric polymer.

30. (Original): The wellbore fluid of Claim 29 wherein the alkaline earth metal peroxide comprises magnesium peroxide.

31-40. (Canceled)

41. (Previously presented): A method of using a change in the pH value of a down hole environment to control the release of peroxide in said down hole environment using produced fluids to effect said change in pH value, wherein the peroxide comprises an encapsulated peroxide source,

wherein the encapsulating material is substantially insoluble in wellbore fluids having a pH value greater than about 7.5.



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42. (Original): The method of Claim 41 wherein the encapsulating material comprises a polymer.
43. (Original): The method of Claim 42 wherein the polymer comprises a film-forming polymer.
44. (Original): The method of Claim 43 wherein the film-forming polymer comprises an enteric polymer.
45. (Original): The method of Claim 44 wherein the enteric polymer comprises a copolymer of acrylic acid compounds and acrylate compounds.
46. (Original): The method of Claim 44 wherein the enteric polymer comprises a copolymer of a mixture of monomers selected from acrylic acid, acrylamide, methacrylic acid, ethylacrylate, methyl methacrylate, and combinations thereof.
47. (Original): The method of Claim 44 wherein the encapsulated peroxide source comprises an inorganic peroxide source.
48. (Original): The method of Claim 47 wherein the inorganic peroxide source is selected from a zinc peroxide, alkaline earth metal peroxides, and combinations thereof.
49. (Original): The method of Claim 48 wherein the alkaline earth metal peroxide comprises magnesium peroxide.

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